and

each structural member and each array member are aligned in the bundle parallel to an alignment axis and occupy a defined position in the two dimensions orthogonal thereto;

~~wherein the array members are cross-sectioned by a non-planar cut.~~

--49. (Amended) A method according to claim 94, wherein the bundle further comprises alignment members effective for aligning wafers with one another.

50. (Twice Amended) A method according to claim 94, wherein each wafer further comprises embedded information spatially separate from said array members.

51. (Amended) A method according to claim 94, wherein the array members are disposed on the surface of the lumen.

52. (Twice Amended) A method according to claim 94, wherein array members completely fill the lumen and form part of said first and second wafer surfaces.

53. (Amended) A method according to claim 94, wherein the array members are cross-sectioned perpendicular to their alignment.

54. (Amended) A method according to claim 94, wherein the array members are cross-sectioned at an angle of 10 to 80 degrees or 100 to 170 degrees to their alignment.

55. (Amended) A method according to claim 94, wherein the array members are cross-sectioned by a smooth planar cut.

57. (Amended) A method according to claim ~~48~~ 56, wherein the surface area of array members exposed by cross-sectioning is increased over that provided by a smooth, ~~non-~~ planar cut.

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~~58.~~ 9 (Amended) A method according to claim ~~94~~ 1, wherein structural members are comprised of a plastic, a glass, a metal or a ceramic.

~~63.~~ 14 (Amended) A method according to claim ~~94~~ 1, wherein the array members are spaced about 1.0 to about 1,000 micrometers apart.

~~64.~~ 15 (Twice Amended) A method according to claim ~~94~~ 1, wherein the array members have a surface area of about 1.0 to about 1,000,000 μm^2.

~~65.~~ 16 (Amended) A method according to claim ~~94~~ 1, wherein the density of array members in the array is about 250 to about 2,500,000 array members per square centimeter of cross sectional surface area of the array.

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~~66.~~ 17 (Twice Amended) A method according to claim ~~94~~ 1, wherein the density in the array is about 10 to about 100,000 array members per square centimeter of total surface area of the array.

~~67.~~ 18 (Amended) A method according to claim ~~94~~ 1, wherein there are about 100 to about 2,500,000 aligned array members.

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~~69.~~ 19 (Amended) A method according to claim ~~94~~ 1, wherein cross-sectioning produces sections about 2.5 to about 2,500 micrometers thick.

~~71.~~ 20 (Twice Amended) A method according to claim ~~94~~ 1, wherein the array members comprise analyte binding reagents.

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C16 77. (Amended) A method according to claim 94 wherein the array members comprise analyte binding reagents that hybridize to DNA or RNA having specific nucleotide sequences, wherein the sequence specific binding reagents are polynucleotides, peptide-nucleic acids or polyamides.

C17 76. (Twice Amended) A method according to claim 94 wherein the array members comprise analyyte binding regents that bind specific polypeptides, wherein the polypeptide-specific binding reagents are polyclonal antibodies, monoclonal antibodies, single chain antibodies, or antigen-binding fragments of antibodies.

C18 78. (Amended) A method according to claim 94, further comprising carrying out an immunoassay, a hybridization assay, a ligand-binding assay or receptor-binding assay, or a substrate analog affinity assay, employing an array prepared by the process of claim 94.

C19 95. (Amended) A method of making replicate arrays, comprising repeatedly sectioning a bundle of aligned array members to make wafers comprising replicate arrays, wherein:

each array comprises structural members each of which has a lumen therethrough which is continuously enclosed thereby;

each array member is a homogenous composition disposed within a separate lumen of a structural member which extends from a first to a second wafer surface formed by said sectioning; and

each structural member and each array member are aligned in the bundle parallel to an alignment axis and occupy a defined position in the two dimensions orthogonal thereto;

wherein there are about 100 to 2,500,000 different aligned array members.

96. (Amended) A method of making replicate arrays, comprising repeatedly sectioning a bundle of aligned array members to make wafers comprising replicate arrays, wherein:

each array comprises structural members each of which has a lumen therethrough which is

continuously enclosed thereby;

each array member is a homogenous composition disposed within a separate lumen of a structural member which extends from a first to a second wafer surface formed by said sectioning; and

each structural member and each array member are aligned in the bundle parallel to an alignment axis and occupy a defined position in the two dimensions orthogonal thereto;

wherein the array members comprise analyte binding reagents that hybridize to DNA or RNA having specific nucleotide sequences.

46 ~~87~~. (Amended) A method of making replicate arrays, comprising repeatedly sectioning a bundle of aligned array members to make wafers comprising replicate arrays, wherein:

each array comprises structural members each of which has a lumen therethrough which is continuously enclosed thereby;

each array member is a homogenous composition disposed within a separate lumen of a structural member which extends from a first to a second wafer surface formed by said sectioning; and

each structural member and each array member are aligned in the bundle parallel to an alignment axis and occupy a defined position in the two dimensions orthogonal thereto;

wherein the array members comprise analyte binding reagents that bind specific polypeptides.

Please add new claims as follows:

58 ~~100~~. (New) A method of claim 48, wherein the bundle further comprises alignment members effective for aligning wafers with one another.

59 ~~101~~. (New) A method of claim 48, wherein each wafer further comprises embedded information spatially separate from said array members.

60 ~~102~~. (New) A method of claim 48, wherein the array members are disposed on the

surface of the lumen.

61 ~~103~~. (New) A method of claim ~~48~~ 66, wherein array members completely fill the lumen and form part of said first and second wafer surfaces.

62 ~~104~~. (New) A method of claim ~~48~~ 56, wherein there are about 100 to about 2,500,000 aligned array members.

63 ~~105~~. (New) A method of claim ~~48~~ 56, wherein the array members comprise analyte binding reagents.

~~106~~. (New) A method of claim ~~48~~ 66, further comprising carrying out an immunoassay, a hybridization assay, a ligand-binding assay or receptor-binding assay, or a substrate analog affinity assay using said arrays.

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27 ~~107~~. (New) A method of claim 95 26, wherein the bundle further comprises alignment members effective for aligning wafers with one another.

28 ~~108~~. (New) A method of claim ~~95~~ 26, wherein each wafer further comprises embedded information spatially separate from said array members.

29 ~~109~~. (New) A method of claim ~~95~~ 26, wherein the array members are disposed on the surface of the lumen.

30 ~~110~~. (New) A method of claim ~~95~~ 26, wherein array members completely fill the lumen and form part of said first and second wafer surfaces.

31 ~~111~~. (New) A method of claim ~~95~~ 26, wherein the surface area of array members exposed by cross-sectioning is increased over that provided by a smooth, ~~non~~-planar cut.

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32 ~~112~~. (New) A method of claim ~~95~~, wherein structural members are comprised of a plastic, a glass, a metal or a ceramic.

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33 ~~113~~. (New) A method of claim ~~95~~, wherein structural members are comprised of a plastic.

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34 ~~114~~. (New) A method of claim ~~95~~, wherein the array members comprise analyte binding reagents.

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35 ~~115~~. (New) A method of claim ~~95~~, wherein analyte binding reagents are one or more of a nucleic acid, a polynucleotide, a DNA, an RNA, an oligonucleotide, a peptide-nucleic acid, an aptamer, a ribozyme, a nucleic acid-binding polyamide, a protein, a peptide, a polypeptide, a glycoprotein, an antibody, an antibody-derived polypeptide, a receptor protein, a fusion protein, a mutein, a lipid, a polysaccharide, a lectin, a ligand, an antigen or a hapten.

C10 cont

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36 ~~116~~. (New) A method of claim ~~95~~, further comprising carrying out an immunoassay, a hybridization assay, a ligand-binding assay or receptor-binding assay, or a substrate analog affinity assay using said arrays.

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38 ~~117~~. (New) A method of claim ~~96~~, wherein the bundle further comprises alignment members effective for aligning wafers with one another.

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39 ~~118~~. (New) A method of claim ~~96~~, wherein each wafer further comprises embedded information spatially separate from said array members.

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40 ~~119~~. (New) A method of claim ~~96~~, wherein the array members are disposed on the surface of the lumen.

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41 ~~120~~. (New) A method of claim 37, wherein array members completely fill the lumen and form part of said first and second wafer surfaces.

42 ~~121~~. (New) A method of claim 37, wherein the surface area of array members exposed by cross-sectioning is increased over that provided by a smooth, ~~non~~-planar cut.

43 ~~122~~. (New) A method of claim 37, wherein there are about 100 to about 2,500,000 aligned array members.

44 ~~123~~. (New) A method of claim 37, wherein there are about 100 to 2,500,000 different aligned array members.

45 ~~124~~. (New) A method of claim 37, further comprising carrying out an immunoassay, a hybridization assay, a ligand-binding assay or receptor-binding assay, or a substrate analog affinity assay using said arrays.

46 ~~125~~. (New) A method of claim 37, wherein the bundle further comprises alignment members effective for aligning wafers with one another.

47 ~~126~~. (New) A method of claim 46, wherein each wafer further comprises embedded information spatially separate from said array members.

48 ~~127~~. (New) A method of claim 46, wherein the array members are disposed on the surface of the lumen.

49 ~~128~~. (New) A method of claim 46, wherein array members completely fill the lumen and form part of said first and second wafer surfaces.

50 ~~129~~. (New) A method of claim 46, wherein the surface area of array members

exposed by cross-sectioning is increased over that provided by a smooth, ~~non-~~planar cut.

57 ~~130~~. (New) A method of claim ~~97~~ 46, wherein structural members are comprised of a plastic, a glass, a metal or a ceramic.

53 ~~131~~. (New) A method of claim ~~97~~ 46, wherein structural members are comprised of a plastic.

~~132. (New)~~ A method of claim ~~97~~ 46, wherein the array members comprise analyte binding reagents.

54 ~~133~~. (New) A method of claim ~~97~~ 46, wherein analyte binding reagents are one or more of a nucleic acid, a polynucleotide, a DNA, an RNA, an oligonucleotide, a peptide-nucleic acid, an aptamer, a ribozyme, a nucleic acid-binding polyamide, a protein, a peptide, a polypeptide, a glycoprotein, an antibody, an antibody-derived polypeptide, a receptor protein, a fusion protein, a mutein, a lipid, a polysaccharide, a lectin, a ligand, an antigen or a hapten.

55 ~~134~~. (New) A method of claim ~~97~~ 46, further comprising carrying out an immunoassay, a hybridization assay, a ligand-binding assay or receptor-binding assay, or a substrate analog affinity assay using said arrays.

64 ~~135~~. (New) A method of making replicate arrays, comprising repeatedly sectioning a bundle of aligned array members to make wafers comprising replicate arrays, wherein:

each array comprises structural members each of which has a lumen therethrough which is continuously enclosed thereby;

each array member is a homogenous composition disposed within a separate lumen of a structural member which extends from a first to a second wafer surface formed by said sectioning; and

each structural member and each array member are aligned in the bundle parallel to an alignment axis and occupy a defined position in the two dimensions orthogonal thereto;

wherein the array members are cross-sectioned by a non-planar cut, and

wherein at least two array members are different from one another.

136. (New) A method of making replicate arrays, comprising repeatedly sectioning a bundle of aligned array members to make wafers comprising replicate arrays, wherein:

each array comprises structural members each of which has a lumen therethrough which is continuously enclosed thereby;

each array member is a homogenous composition disposed within a separate lumen of a structural member which extends from a first to a second wafer surface formed by said sectioning; and

each structural member and each array member are aligned in the bundle parallel to an alignment axis and occupy a defined position in the two dimensions orthogonal thereto;

wherein there are about 100 to 2,500,000 different aligned array members, and

wherein at least two array members are different from one another.

137. (New) A method of making replicate arrays, comprising repeatedly sectioning a bundle of aligned array members to make wafers comprising replicate arrays, wherein:

each array comprises structural members each of which has a lumen therethrough which is continuously enclosed thereby;

each array member is a homogenous composition disposed within a separate lumen of a structural member which extends from a first to a second wafer surface formed by said sectioning; and

each structural member and each array member are aligned in the bundle parallel to an alignment axis and occupy a defined position in the two dimensions orthogonal thereto;

wherein the array members comprise analyte binding reagents that hybridize to DNA or RNA having specific nucleotide sequences, and

wherein at least two array members are different from one another.